WHAT IS CLAIMED IS:

1. An actuation assembly comprising:

a mechanical member comprising an alloy, said alloy member to undergo an internal change in structure thereby producing a force set within the mechanical member; and

a pivot member moved by said force, said mechanical member applying said force to said pivot member.

2. The actuation assembly of claim 1, wherein the alloy member is made of a shape-memory alloy taken from a group of alloys comprising of the products Nitinol™ and Flexinol™.

3. A hard disk drive comprising an actuation assembly and a housing having a receptacle which removably receives a cartridge, a cover formed of a cover material and a front loading panel disposed over the receptacle, the actuation assembly comprising:

a hinge assembly; and

a drive assembly comprising an alloy member which is coupled to the hinge assembly; and

a power supply which generates an electrical current, the current used to sufficiently raise the temperature of the alloy member causing the alloy member to undergo an internal change in structure thereby producing a force set within the alloy member, the force being sufficient to actuate movement of the hinge assembly.

4. The actuation assembly of claim 3, the hinge assembly comprising:

a first mechanical arm coupled to a pivot rod; and

a second mechanical arm coupled to the pivot rod, wherein the contraction force causes rotation of the pivot rod which causes the arms to rotate, the pivot rod defining the axis of rotation.

5. The actuation assembly of claim 3, the hinge assembly comprising: a single hinge coupled to the loading panel.

6. The actuation assembly of claim 3, wherein the drive assembly further comprises:

a cam assembly comprising:

a cam rotatable between an initial position and first and second extended positions;

a cam spring in slidable contact with a portion of the cam member surface, whereby the cam spring engages the portion of the cam member surface to locate the cam member in each of said positions; and

a biasing member coupled to the cam member to return the alloy member to the initial position following the removal of the alloy member force.

7. The actuation assembly of claim 3, the drive assembly further comprising:

a lever, having a first end and a second end, rotatable about a pivot location between a first position and a second position, the first end coupled to the alloy member and the second end coupled to a biasing spring, the biasing spring to return the alloy member to an initial position following the removal of the alloy member force.

8. The actuation assembly of claim 3, the drive assembly further comprising a cable having a first end coupled to the alloy member.

9. The actuation assembly of claim 3, wherein the power supply is activated or deactivated by a switching mechanism.

10. The actuation assembly of claim 9, wherein deactivation of the current causes the internal structure of the alloy member to return to its initial state thereby removing the alloy member force.

11. The actuation assembly of claim 3, wherein the alloy member is made of a shape-memory alloy taken from a group of alloys comprising of the products Nitinol™ and Flexinol™.

12. The actuation assembly of claim 3, wherein the alloy member is disposed within a protective shield.

13. The actuation assembly of claim 3 further comprising a pair of hinge assemblies coupled to said loading panel.

14. A method for manipulating members of a removable hard disk drive, the removable hard disk drive comprising a housing having a receptacle which removably receives a cartridge, a cover formed of a cover material and a front loading panel disposed over the receptacle, the method comprising:

selecting an alloy member which undergoes an internal change in structure when subjected to a change in temperature;

generating an electrical current, the current used to sufficiently raise the temperature of the alloy member to produce a force set within the alloy member; and

moving a component of the drive using the alloy member force.

15. The method of claim 14, wherein the alloy member comprises a shape-memory alloy taken from the group comprising of Nitinol™ and Flexinol™.

16. A method comprising:

supplying energy to an alloy member causing the alloy member to undergo an internal change in structure thereby producing a force set within the alloy member; and

actuating movement of a device by coupling said force to said device.

17. The method of claim 16, wherein the alloy member comprises a shape-memory alloy taken from the group comprising of Nitinol™ and Flexinol™.

18. A method for fabricating an actuation assembly for a hard disk drive comprising a housing having a receptacle which removably receives a cartridge, a cover formed of a cover material and a front loading panel disposed over the receptacle, the method comprising:

selecting an alloy member, having a first end and a second end, which can undergo an internal change in structure, which produces a force within the alloy member;

affixing said first end of the alloy member to a pivot assembly; and

affixing said second end of the alloy member to a hinge mechanism, the hinge mechanism being coupled to a loading panel.

19. A method as in claim 18, wherein the pivot assembly comprises:
positions;
a cam spring in slidable contact with a portion of the cam member surface, whereby the cam spring engages the portion of the cam member surface to locate the cam member in each of said positions; and
a biasing member coupled to the cam member to return the alloy member to the initial position following the removal of the alloy member force.

20. A disk drive system for use with a removable disk cartridge, the disk drive system comprising a housing having a receptacle which removably receives the cartridge, the housing having a cover formed of a cover material and a door, the door being coupled to an actuation assembly comprising:
a first arm coupled at a first end to the proximal end of a pivot shaft and coupled at a second end to the door;
a second arm coupled at a first end to the distal end of a pivot shaft and coupled at a second end to a biasing mechanism;
a shape-memory alloy wire mechanically coupled to the second end of the second arm and a position on the housing;
a power supply activated by a switch positioned on the housing, wherein the power supply generates a current; and
an electrical connection for applying the current to the wire, wherein the wire is heated by the current which causes the wire to contract generating a pulling force which is adapted to actuate the first and second arms.

21. The actuation assembly of claim 20, wherein the alloy material comprises a shape-memory alloy taken from the group of alloys comprising of Nitinol™ and Flexinol™.